AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph on page 3, lines 18-29, as follows.

In order to accomplish the foregoing objects, as one aspect of the present invention, there is provided an apparatus for detecting a rollover of a vehicle, comprising: a detector detecting a roll angular velocity of the vehicle; a memory unit memorizing a value of the roll angular velocity detected by the detector; a calculator calculating a predictive value ~~to~~ of the roll angular velocity to be expected when a predetermined period of time elapses, by using a past value of the roll angular velocity of the vehicle, the past value being memorized in the memory unit; and a rollover determination unit determining whether or not there is a possibility that the vehicle will make a rollover, on the basis of the predictive value ~~to~~ of the roll angular velocity.

Please amend the paragraph from page 3, line 30, through page 4, line 5, as follows.

In this way, a value of the roll angular velocity generating in the past is used to predict a value of the roll angular velocity to be expected from now on. This predictive value ~~to~~ of the roll angular velocity is then reflected in the determination of a vehicle's rollover. For example, a vehicle makes a rollover at a fast velocity, a temporal change amount of the roll angular velocity becomes larger, and the predictive value shows a larger amount as well. Accordingly, in determining whether or not there is a possibility of causing a rollover, the use of the predication value ~~to~~ of the roll angular velocity leads to an early determination for a vehicle's rollover whose roll angular velocity is high.

Please amend the paragraph on page 4, lines 6-11, as follows.

It is preferred that the calculator be configured to use the value ~~to~~ of the roll angular velocity to obtain a derivative of the roll angular velocity and to calculate the predictive value ~~to~~

of the roll angular velocity using a Taylor's expansion of the derivative directed to a time instant when the predetermined period of time elapses.

Please amend the paragraph on page 4, lines 12-23, as follows.

It is also preferred that the apparatus comprises an acquiring unit acquiring a roll angle of the vehicle, wherein the rollover determination unit is configured to perform the determination on the basis of a relationship between a value of the roll angle and the predictive value ~~to~~ of the roll angular velocity. In this configuration, preferably, the acquiring unit is either a unit detecting the roll angle of the vehicle or a unit calculating the roll angle of the vehicle by integrating the roll angular velocity. It may also be possible that the rollover determination unit is configured to perform the determination in consideration of a relationship between the value of the roll angle and the value of the roll angular velocity.

Please amend the paragraph from page 9, line 36, through page 10, line 7, as follows.

The predictive value calculating block 32 receives data of the roll angular velocity occurred in the past, which is also stored in the data storage 36, and calculates a derivative Frr[t] of the roll angular velocity. Additionally, the block 32 uses this derivative Frr[t] to obtain, by the Taylor's expansion, a predictive value RRY ~~to~~ of the roll angular velocity at the next time instant coming when a predetermined period of time T has elapsed from the current time instant.

Please amend the paragraph on page 10, lines 8-14, as follows.

In this calculation, when the vehicle is in a fast rollover, the derivative is calculated up to a value in ~~as its higher~~ order as high as possible, because the second or higher order derivative Frr[t] of the roll angular velocity can be calculated. This way of calculation is helpful for

calculating a high-accuracy predictive value RRY ~~to~~ of the roll angular velocity. The predetermined period of time T can be set to an arbitrary value.

Please amend the paragraph on page 12, lines 1-5, as follows.

At step S100 in Fig. 2, data of a roll angular velocity RR is read in. Then at step S110, the roll angular velocity RR is subjected to calculation of a predictive value RRY ~~to~~ of the roll angular velocity RR. At step S120, the data of the roll angular velocity RR undergoes integration to compute a roll angle RA.

Please amend the paragraph on page 12, lines 6-11, as follows.

At the next step S130, the map shown in Fig. 3 is used to specify a particular position on the map, the particular position being defined by both of the predictive value RRY ~~to~~ of the roll angular velocity calculated at step S110 and the roll angle RA calculated at step S120. From this mapping work, the possibility that the vehicle makes a roll is determined.

Please amend the paragraph on page 13, lines 15-26, as follows.

In the above configuration of the controller 30, for determining whether or not there is a possibility of a vehicle's rollover at a time after a predetermined period of time T, both the roll angle RA and the predictive value RRY ~~to~~ of the roll angular velocity are used by the rollover predicting block 34. Alternatively, this can be replaced with another configuration, in which the block 34 considers only the predictive value RRY ~~to~~ of the roll angular velocity. For example, the larger the predictive value RRY, the higher the possibility of a vehicle's rollover. This determination way is still effective for determining a vehicle's rollover carried out at higher roll angular velocities in an earlier stage of the rollover.

Please amend the paragraph on page 14, lines 8-21, as follows.

This difference will now be detailed. In the first embodiment, both the roll angle RA and a predictive value ~~to~~ of the roll angular velocity RRY are used to determine such a possibility at a time instant when a predetermined period of time T passes from the present. In contrast, in the second embodiment, the rollover predicting block 34 is functionally placed in the controller 30 shown in Fig. 5 so that the block 34 performs the determination in a different way. The rollover predicting block 34 uses a predictive value RAY ~~to~~ of the roll angle, together with the already explained predictive value RRY ~~to~~ of the roll angular velocity, to determine whether or not there is a possibility that the vehicle will make a rollover at a time instant when a predetermined period of time T elapses from the present.

Please amend the paragraph on page 14, lines 22-33, as follows.

Practically, as shown in Fig. 5, in the second embodiment, the predictive value calculating block 32 is placed to accept the data of the roll angle RA outputted from the integration block 31. This block 32 is thus configured to calculate not merely a predictive value RRY ~~to~~ of the roll angular velocity, like the first embodiment, but also a predictive value RAY ~~to~~ of the roll angle to be expected after a predetermined period of time T with the use of the data of the roll angle from the integration block 31 and the revealed predictive value RRY ~~to~~ of the roll angular velocity. The predictive value RAY ~~to~~ of the roll angle can be computed on the following formula, for example.

Please amend the paragraph from page 14, line 35, through page 15, line 5, as follows.

In addition, the rollover predicting block 34 in the controller 30 is configured to receive both the predictive value RAY ~~to~~ of the roll angle and the predictive value RRY ~~to~~ of the roll

angular velocity and perform a determination whether or not a vehicle's rollover will be caused at a time instant after a predetermined period of time T passes from the present time instant.

Please amend the paragraph on page 15, lines 25-31, as follows.

Steps S100 to S120 in Fig. 6 are the same as those in Fig. 2 showing the first embodiment. That is, at step S100, data of a roll angular velocity RR is read in. Then at step S110, the roll angular velocity RR is subjected to calculating a predictive value RRY ~~to~~ of the roll angular velocity. At step S120, the data of the roll angular velocity RR undergoes integration to compute a roll angle RA.

Please amend the paragraph on page 15, lines 32-36, as follows.

The processing is further moved to step S125, where the data of the roll angle RA is subjected to computation of a predictive value RAY ~~to~~ of the roll angle RA based on, for example, the same way as that for the predictive value RRY ~~to~~ of the roll angular velocity RR, as stated in the first embodiment.

Please amend the paragraph on page 16, lines 1-14, as follows.

The processing is then carried out at step S130a, where the map exemplified in Fig. 3 is used to determine whether or not a vehicle's rollover will be caused at a time instant coming when the predetermined period of time T elapses. Practically, in the similar manner to the foregoing, both the predictive value RRY ~~to~~ of the roll angular velocity (calculated at step S110) and the predictive value RAY ~~to~~ of the roll angle (calculated at step S125) defines a point to be mapped on the map. A determined result (i.e., a rollover determined result for the vehicle's rolling state at a future predetermined time instant) at step S160 is handed to the activation

determining block 35, to which a determined result (i.e., a rollover determined result for the current vehicle's rolling state) by the rollover determining block 33 is forwarded.

Please amend the paragraph on page 16, lines 20-28, as follows.

Accordingly the activation apparatus according to the present embodiment is able to determine the possibility of occurrence of a vehicle's rollover using the relationship between the predictive values RAY and RRY ~~to~~ of the roll angle and the roll angular velocity. Such an additional employment of the roll angle enables a vehicle's future rolling state to be predicted with more precision. It is therefore possible to determine, more accurately, whether or not the vehicle will make a rollover.

Please amend the paragraph on page 17, lines 14-17, as follows.

In the controller 30, the predictive value calculating block 32 produces difference values of the roll angular velocity, which are obtained in connection with calculating the predictive value RRY ~~to~~ of the roll angular velocity.

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